

# **Survey Questions for A Study of the Project Management Behavior in the IT Sector**

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# Survey Questions for A Study of the Project Management Behavior in the IT Sector

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## Abstract

We have conducted an online survey to review worldwide project management practices in the IT sector. Through this study, our goal is to identify factors that influence the success rate of IT projects and elaborate a new project management approach that will help businesses in the project management discipline.

## 1. Introduction

The present survey is a significant component of de Andrade's Ph.D. thesis work. Through this survey, we will investigate the actual picture of management projects specifically in the Information Technology (IT) sector across many countries, with a focus on Brazil and Canada. According to the Project Management Institute, less than 50% of worldwide IT management projects are successfully completed [1, 2]. Our ultimate goal is to collect data from different companies, examine the best project management practices, and determine the factors that can contribute to the success of IT projects. With these data, it will be possible to suggest a new project management approach to help companies achieve a higher success rate. This study was approved by the University of Regina Ethics Board. The approval certificate is posted on the following link: <https://goo.gl/KyzjZF>.

This paper exposes the questions that are fundamental to review IT project management methods. More precisely, we structured the survey into four main sections:

- Profile of project managers and project processes in companies (do companies have formal approaches and formal training? check the relationship between the profiles and project success; test the usability of management software).
- Profile of companies (location, size and type of industries).
- Profile of projects (types of projects, success factors and main difficulties).
- Risk management of projects (how risk management has an influence on the success rate, and how to increase this rate to save money and time).

Preliminary results, analysis, and discussion of the survey will be published in a journal article. Sections 2 to 5 present the screenshots about the survey questions.

An example of studies that is related to this survey is the BIM system introduced in [3]. In this paper, through a small survey, the authors identified some gaps between the literature in project management and real-world scenarios. These gaps are in the tasks of tracking the Key Performance Indicators (KPIs) that have an impact on the development and success of businesses. Based on an analytical study, the authors developed the BIM system that can track in real-time the KPIs of a company.

## 2. Survey Information

### An international study about the Project Management Behavior in the IT sector

You are invited to participate as a volunteer in an international study about Project Management. This survey is part of the Ph.D. research of Paulo Andrade ([martinsp@uregina.ca](mailto:martinsp@uregina.ca)), at the University of Regina in Canada, under the supervision of Dr. Samira Sadaoui. The UofR Research Ethics Board approved this project on ethical grounds on February 1, 2017 and you can check the approval certificate here: <https://goo.gl/OOYZHj>

All entries are ANONYMOUS, your personal data will not be recorded and no one will not be able to identify you.

#### Main Objectives of the Study:

In this research, we will investigate the actual picture of the IT Project Management field in the world. From past data, we know that less than 60% of the IT projects are completed with success (on budget and on time). Through this study, we hope to understand better the behavior of project management practices and identify the factors that can contribute to the success of a project.

Your contribution is crucial to the success and quality of this work. This survey is divided in 4 sections and it will take between 10 to 15 minutes to complete everything. This survey will be available until May 31, 2017. We expect to publish the results until the end of June. We appreciate your cooperation and we commit to sending the executive summary of the research results at the end of this study if it is of your interest. We will put a link for a separate form at the end of this study to ensure your anonymity.

It is important to remember that the purpose of this study is not to misrepresent or criticize your work or your company, but only to get to know the best practices and to develop new ones based on the research results aligned with the literature review.

Your participation is voluntary and will not result in any penalties. You can find more information at <https://goo.gl/iF7dF8>.

Figure 1 - Survey Presentation

**Procedures:**

- We will conduct this study entirely online using the Google Form, and it will take between 10 to 15 minutes.
- Please feel free to ask any questions regarding the procedures and goals of the study or your role.
- The survey will close on March 20, 2017.

**Potential Risks:**

- There are no known or anticipated risks to you by participating in this research

**Potential Benefits:**

- Improve the knowledge and use of the Project Management discipline for IT projects by the companies and universities.

**Confidentiality:**

- The collected survey data will be confidential, and the respondents will not be identified. We do not collect your IP address or browser information. No additional actions are necessary to grant you an anonymity.

**Right to Withdraw:**

- During the survey, the participants can withdraw their participation from the research project for any reason, at any time without explanation or penalty of any sort, with the simple act of close the browser. This process is possible because the system just saves the data when the participants submit the answers.
- They cannot withdraw the participation after the submission because will not be possible for us identify their answers.

*Figure 2 - Additional Information for the Survey*

## Invitation Letter for Academic Survey Research

February 21, 2017.

Dear \_\_\_\_\_:

We are surveying the professional of all levels of project management to investigate how is going the IT Project Management field in the world. From past data, we know that less than 60% of the IT projects are completed with success (on budget and on time).

The main idea here is to collect new data from different companies and analyze what they do to succeed or to fail in an IT projects. With this data, it will be possible to suggest a new approach that can help companies get a higher success rate.

We would greatly appreciate if you could share the brief questionnaire with your members. We expect that it should take approximately 15 minutes for them to complete it. We need your support to make it a success. In this way, we all could collaborate in the growing of the project management discipline and the creation of new knowledge. The survey deadline is March 31, 2017

The participation is voluntary, and all responses will be anonymous. There is a link for another form at the end of our survey where the participant can inform an email to receive the research results. This study was approved by the University of Regina "Research Ethics Board" (REB).

The survey link is: <https://goo.gl/oJq7jF>. There you can find more detailed information about the survey and a copy of the REB approval as well.

If you can help us with this publicity, we would like that you could return this message informing us and we will be able to add your chapter at the end of this research as one of the supporters, if it is in your best interest.

If you have any question, do not hesitate in contact the responsible for this survey, Paulo Andrade, my Ph.D. Student., though the email [martinsp@uregina.ca](mailto:martinsp@uregina.ca).

Thank you in advance for your help.

Sincerely,

Paulo Andrade

*Figure 3 - Invitation Letter*

### 3. Survey Questions

**Section 1.1 – Profile of the interviewed**

How old are you? \*

Escolher ▼

Your position \*

Escolher ▼

Your highest degree level \*

Escolher ▼

Kind of project that you participate \*

☐ Entry-level

☐ Small and low-risk projects

☐ Small and moderate risk projects

☐ Medium-size, moderate risk projects

☐ Medium-size, high risk projects

☐ Large, highly integrated projects

Figure 4 - Survey, Questions 1-4

**Certifications that you hold \***

☐ PMP

☐ PRINCE 2

☐ CAPM

☐ PMI-ACP

☐ SCRUM

☐ ISO

☐ ITIL

☐ COBIT

☐ MOF

☐ SIX SIGMA

☐ CMMI

☐ PgMP

☐ Other: \_\_\_\_\_

**Years of experience with Project Management \***

Choose ▼

**Years of experience with IT Project Management \***

Choose ▼

Figure 5 - Survey, Questions 5-7

**Years of experience with Agile Project Management \***

Choose ▼

**Number of projects that you managed \***

Choose ▼

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Figure 6 - Survey, Questions 8-9

## Section 1.2 – Profile of the company

Country of your company \*

Choose



Type of industry \*

Choose



Annual Gross Income (US\$) \*

Choose



Number of employees in the company \*

Choose



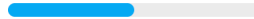
Number of employees in the IT department \*

Choose



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Figure 7 - Survey, Questions 10-14



## Section 2 – Profile of project management processes

Does company have a formal Project Management Approach? \*

- ☐ Yes
- ☐ No
- ☐ Not sure

What are the approaches that your company most use to manage projects? \*

- ☐ PMBOK based approach
- ☐ Prince 2
- ☐ Agile / Scrum
- ☐ Combination of 2 or more methods
- ☐ Own project management approach
- ☐ Not applicable / None
- ☐ Other: \_\_\_\_\_

Does company use any approach to verify the project complexity? \*

- ☐ Yes
- ☐ No
- ☐ Not sure

Figure 8 - Survey, Questions 15-17

Does company use any method to check the project risk? \*

- ☐ Yes
- ☐ No
- ☐ Not sure

Does the company have a historical base of projects? \*

- ☐ Yes
- ☐ No
- ☐ Not sure

Does company have a Project Management Office (PMO)? \*

- ☐ Yes
- ☐ No
- ☐ Not sure

Does company have support from the administrative border for new projects? \*

- ☐ Yes
- ☐ No
- ☐ Not sure

Figure 9 - Survey, Questions 18-21

Does company have portfolio project management approach? \*

- ☐ Yes
- ☐ No
- ☐ Not sure

Are all the project team members trained in the Project Management Approach ? \*

- ☐ Yes
- ☐ No
- ☐ Not sure

Does company use software to manage the projects? \*

- ☐ Yes
- ☐ No
- ☐ Not sure

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Figure 10 - Survey, Questions 22-25

### Section 3 – Profile of projects

About the general view of projects, how many were successful in 2016 (delivered on time, on the budget, and with the required features and functions)? \*

Choose



About the general view of projects, how many were delivered with success but with the cost overrun in 2016? \*

Choose



About the general view of projects, how many were delivered with success but with time overrun in 2016? \*

Choose



About the general view of projects, how many were challenging in 2016? \*

Choose



About the general view of projects, how many were considered as failure in 2016 (do not met all the expectative or were aborted)? \*

Choose



About the general view of projects, how many of them had incidents with identified risks in 2016? \*

Choose



Figure 11 - Survey, Questions 26-32

In relation with the previous question, did the company use the risk plan to solve the incident in the most of times? \*

- ☐ Not applicable
- ☐ Yes
- ☐ No

About the general view of projects, how many of them had incidents with NON-identified risks in 2016? \*

Choose ▼

About the general view of projects, how many of them lost opportunities with NON-identified risks in 2016? \*

Choose ▼

What is the average duration of projects? \*

Choose ▼

What is the average value of projects? \*

Choose ▼

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Figure 12 - Survey, Questions 33-37

## Section 4 – Organizational performance and risk management

How your company prioritize projects? \*

- ☐ Strategic alignment
- ☐ Expected benefits
- ☐ ROI
- ☐ Other: \_\_\_\_\_

How project success is measured? \*

- ☐ Satisfied stakeholders
- ☐ Delivered on time
- ☐ Delivered within budget
- ☐ Achieves target benefits
- ☐ Produces high-quality deliverables
- ☐ Achieves acceptable ROI
- ☐ Delivered without changes
- ☐ Other: \_\_\_\_\_

Figure 13 - Survey, Questions 38-39

**What are the keys to project success? \***

- ☐ Team's technical skills
- ☐ Executive support
- ☐ Effective team communication
- ☐ Agile techniques
- ☐ The leadership of certified Project Managers
- ☐ Effective soft skills among staff
- ☐ The good project management approach
- ☐ The risk management
- ☐ The change management
- ☐ The project documentation
- ☐ Other: \_\_\_\_\_

**Why should the company use a project management methodology? \***

- ☐ Meet budget
- ☐ Stay on schedule
- ☐ Meet scope
- ☐ Meet quality standards
- ☐ Meet expected benefits
- ☐ Other: \_\_\_\_\_

*Figure 14 - Survey, Questions 40-41*

Types of project management training offered by the organization \*

- ☐ None
- ☐ Classroom setting
- ☐ Online self-paced course
- ☐ Online situational sessions
- ☐ Paper-based self-studies
- ☐ Other: \_\_\_\_\_

Figure 15 - Survey, Question 42



**Barriers to the project success \***

- ☐ Changing priorities within organization
- ☐ Inaccurate requirements
- ☐ Change in project objectives
- ☐ Undefined risks/opportunities
- ☐ Poor communication
- ☐ Undefined project goals
- ☐ Inadequate sponsor support
- ☐ Inadequate cost estimates
- ☐ Inaccurate task time estimate
- ☐ Resource dependency
- ☐ Poor change management
- ☐ Inadequate resource forecasting
- ☐ Inexperienced project manager
- ☐ Limited resources
- ☐ Procrastination within team
- ☐ Task dependency
- ☐ Unexplained causes
- ☐ Shifting requirements/technical complexity
- ☐ Confusion with team roles and responsibilities.
- ☐ Unaligned team/missing skills
- ☐ Other: \_\_\_\_\_

*Figure 16 - Survey, Question 43*

What is the impact of the Risk Management in the success rate for your projects? \*

Choose ▼

How do you manage risks in your projects? \*

- ☐ Not applicable / Do not manage risks
- ☐ PM Software
- ☐ Web-based system of risks
- ☐ Spreadsheets
- ☐ Formal text document
- ☐ IT support system
- ☐ Other: \_\_\_\_\_

How do you find risks in your projects? \*

- ☐ Not applicable / Do not manage risks
- ☐ Historical document from past projects
- ☐ Online searches
- ☐ Project Manager Knowledge
- ☐ Team and project meetings
- ☐ Benchmarking
- ☐ Opinion from specialists
- ☐ Other: \_\_\_\_\_

Figure 17 - Survey, Questions 44-46

What are the kind of the main risks that happened in your past projects? \*

- ☐ Not applicable / Do not manage risk
- ☐ New technologies (Scope changes / opportunity)
- ☐ Political demands (Scope changes / threat)
- ☐ Currency changes (Over budget / threat)
- ☐ Currency changes (Under budget / opportunity)
- ☐ Team changes (Over time / threat)
- ☐ Team changes (Under time / opportunity)
- ☐ Climate changes (Infrastructure projects / threat)
- ☐ Law demands (Scope changes)
- ☐ New business border (Priority changes)
- ☐ Tem member disease (Schedule changes)
- ☐ Machine failure (Over budget and time)
- ☐ Client reduces the scope (opportunity)
- ☐ Underestimated complexity (threat)
- ☐ Overestimated complexity (opportunity)
- ☐ Bugs in the developed software (Over budget and time)
- ☐ Non-approval of delivery (Schedule changes)
- ☐ Project fails for does not meet their goals
- ☐ Other: \_\_\_\_\_

Figure 18 - Survey, Question 47

How many of these risks were expected? \*

Choose ▼

How many of these risks had a risk plan? \*

Choose ▼

Does your company reevaluate the risk during the project and update them? \*

☐ Yes

☐ No

☐ Not sure

Do you have final comments for this survey or final thoughts that you like to share with us? Feel free to use the space bellow.

Your answer \_\_\_\_\_

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Figure 19 - Survey, Questions 48-51

#### 4. References

- [1] P. M. Institute. A Guide to the Project Management Body of Knowledge (PMBOK Guide) , Sixth Edition, Project Management Institute, 2017.
- [2] P. R. M. de Andrade, A. B. de Albuquerque, O. F. Frota, J. F. da Silva Filho. PM5: One approach to the management of IT projects applied in the Brazilian public sector. Proceedings of 13th International Conference on Software Engineering Research and Practice (SERP), WorldComp, pp. 49–54, 2015.
- [3] P. R. M. de Andrade and S. Sadaoui. Improving business decision making based on KPI management system, Proceedings of IEEE International Conference on Systems, Man, and Cybernetics (SMC), Banff, AB, pp. 1280-1285, 2017.